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SUBSIDIARY BODY FOR IMPLEMENTATION
Twelfth session
Bonn, 12-16 June 2000
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IMPLEMENTATION OF ARTICLE 4.8 AND 4.9 OF THE CONVENTION (DECISION 3/CP.3 AND ARTICLES 2.3 AND 3.14 OF THE KYOTO PROTOCOL)

Note by the chairmen of the subsidiary bodies

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I. MANDATE

1. The Conference of the Parties (COP), at its fifth session,[1] decided that workshops on the implementation of Article 4.8 and 4.9 of the Convention be organized in two consecutive, equal time periods before the end of March 2000 (FCCC/CP/1999/6/Add.1). One workshop was to be on the consideration of initial actions, including actions related to funding, insurance and the transfer of technology, needed to meet the specific needs and concerns of developing country Parties, and the specific needs and special situations of the least developed countries, arising from the adverse effects of climate change on, *inter alia*, water resources, agriculture and food security, economic activities, coastal zones and health. The other workshop was to be on methodological approaches and what actions are necessary under the Convention relating to the impact of the implementation of response measures, on, *inter alia*, terms of trade, international capital flows and developmental efforts, in accordance with Article 4.8 and 4.9 of the Convention and in the light of matters related to Article 3.14 of the Kyoto Protocol.

2. Under the guidance of Mr. Harald Dovland, Chairman of the Subsidiary Body for Scientific and Technological Advice (SBSTA), assisted by Mr. Mohammad Reza Salamat, Vice-Chairman of the Subsidiary Body for Implementation (SBI), Mr. Bo Kjellén (Sweden) and Mr. Mohammed Barkindo (Nigeria), these two workshops were held from Thursday, 9 March 2000 to Saturday, 11 March 2000, and from Monday, 13 March 2000 to Wednesday, 15 March 2000, respectively, at Bonn.

II. SCOPE

3. This report in two parts, on the outcome of the workshops, is made available to the subsidiary bodies for consideration at their twelfth and thirteenth sessions, in order to make recommendations to the Conference of the Parties at its sixth session. According to the programme of work annexed to decision 5/CP.4, the COP, at its sixth session, is to identify any additional actions needed to address the implementation of Article 4.8 and 4.9 of the Convention, as well as Articles 2.3 and 3.14 of the Kyoto Protocol (FCCC/CP/1998/16/Add.1).

4. The workshops included presentations by experts followed by panel discussions in which the policy-related implications of the information presented were addressed. Participants acquired a better understanding of the complex issues raised in Article 4.8 and 4.9 of the Convention. The agendas for the workshops are reproduced in the annexes to this note.

5. The report, in two parts, on the workshops is set out in section III below.

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[1] Decision 12/CP.5.

III. REPORT ON THE WORKSHOPS MANDATED BY DECISION 12/CP.5

A. Part I: Workshop on initial actions relating to the adverse effects of climate change in accordance with Article 4.8 and 4.9 of the Convention

The following issues were presented and discussed during the workshop:

6. In identifying adaptation options within the context of sustainable development plans, an iterative approach is needed, which starts with data collection, and moves to the enhancement of systematic observation and monitoring systems, then to strengthening technical and institutional capacity, and finally to the identification of projects and actual implementation of adaptation activities. Some developing countries are more advanced than others in their capacity to conduct vulnerability assessments and to identify adaptation options. In this light, the least developed countries are in particular need of systematic support, which could be planned for implementation within a specified time frame, to be able to effectively address the adverse effects of climate change The financial and technical support needed for these activities should constitute a continuous and ongoing process rather than ad hoc events and short-term projects.

7. Sufficient information is available to warrant adaptation activities in some sectors, such as coastal zones, food security and water resources. For sectors where information is lacking, actions specifically directed at enhancing the capacity for data collection, modelling the effects of climate change, and socio-economic scenarios, as well as for conducting inter-sectoral vulnerability assessments, are needed at the regional and national levels. An integrated approach to addressing the needs of developing countries arising from the adverse effects of climate change should be adopted, in conjunction with their sustainable development plans, including priorities related to livelihood security; and models need to be developed to meet these objectives. Alternative ways also need to be identified (e.g. questionnaires) to supplement the information provided through the national communications, which is being compiled by the UNFCCC secretariat in its process of compilation and synthesis of national communications.

8. There is an interrelationship and overlap among the adverse effects of climate change on the different socio-economic sectors, and the specific needs and circumstances of developing countries therein. In this light, possible links with the desertification and biodiversity convention processes should also be explored, particularly to examine how ecosystem management can integrate with efforts to reduce the vulnerability of developing countries to the adverse effects of climate change.

9. A sectoral and/or regional approach in dealing with support activities needs to be adopted, including for the organization of workshops, and the possible development of specialized sectoral/regional centres, which would serve as nodal points for information networks, and would also provide technical training, making use of the commonality of issues within their respective sectors/regions, and of the benefits of their potentially larger scale as compared to national entities. These centres could be established as an enhancement to already existing research, educational or training institutions.

10. At the national level, information dissemination among scientists, policy makers in different government entities, and other stakeholders needs to be enhanced. Information on successful indigenous efforts undertaken by developing countries to address their needs arising from the adverse effects of climate change could also be disseminated. Education, training and public-awareness activities need more support at the national level. These should target the general public, educational entities, policy makers, negotiators, and those involved with the national implementation of climate change activities.

11. Insurance-related actions need to be explored, particularly as a means of addressing potential losses arising from climate-related natural disasters. More information is needed on, *inter alia*, examples of actions already supported by the insurance industry to reduce the risk of vulnerable areas, and the establishment of global/regional mechanisms to distribute the risk.

12. Support is needed to improve disaster preparedness in areas vulnerable to climate-related natural disasters, in particular to strengthen early-warning systems. Climate-change considerations should be integrated into reconstruction efforts following natural disasters.

13. Information on current development cooperation initiatives related to adaptation activities is available. Successful examples covering the broad range of available options should be disseminated and taken into account. Similarly, lessons need to be drawn from unsuccessful experiences. Climate-change related support should be integrated into sustainable development efforts, including poverty eradication, food security, education, health and renewable energy, particularly in the least developed countries, where widespread poverty limits adaptive capacity. Planning for the inclusion of climate-change priorities into development aid projects should be formulated through a dialogue between donor and recipient countries.

14. The following measures were mentioned by participants as possible initial actions to address the adverse effects of climate change on developing countries under Article 4.8 and 4.9 of the Convention:

(a) Giving due emphasis to the least developed countries in addressing these measures;
(b) Supporting preliminary data and information gathering;
(c) Supporting conducting thematic and/or regional workshops, including a workshop to explore insurance-related actions;
(d) Strengthening systematic observation and monitoring networks;
(e) Enhancing technical training for vulnerability assessment, integrated assessment, environmental management, and the development of adaptation options;
(f) Building institutional capacity for integrating adaptation into sustainable development programmes;
(g) Implementing adaptation projects in developing countries;
(h) Providing technology transfer and funding requirements for the abovementioned measures.

B. Part II. Workshop on methodological approaches and what actions are necessary under the Convention relating to the impact of the implementation of response measures, in accordance with Article 4.8 and 4.9 of the Convention and in the light of matters related to Article 3.14 of the Kyoto Protocol.

The following issues were presented and discussed during the workshop:

15. The assessment of the impact of the implementation of response measures to climate change needs to be addressed within the broader context of sustained economic growth and the eradication of poverty in developing countries, bearing in mind that some developing countries may be subject to both the adverse effects of climate change and the impact of the implementation of response measures. In this light, the specific needs and special situations of the least developed countries should be given special consideration. Interaction with relevant processes under other multilateral instruments and bodies could be useful in this respect, including the United Nations Convention to Combat Desertification and the United Nations Conference on Trade and Development.

16. Economic models, both top-down and bottom-up, are relevant tools that could provide insight into the net impact of the implementation of response measures to climate change on developing countries, particularly those countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels (including oil, coal and natural gas), and associated energy-intensive products. These impacts would be transmitted through changes in terms of trade, capital flows and developmental efforts.

17. While these economic models have improved and continue to evolve, differences of opinion remain on whether there is sufficient evidence that such impacts will materialize, and on the extent of associated welfare losses. Sources of uncertainty in these economic models relate to assumptions on the nature of future technological evolution, national macroeconomic policies, changes in estimates of fossil-fuel reserves, and future fossil-fuel output and price levels, including the extent to which these will be subject to competitive market forces. Models need to incorporate the effect of a reduction in emissions of all greenhouse gases as well as removals by sinks. They also need to take into account the effects of policies and measures, including through the use of historical data. In addition, they need to be disaggregated at the regional and national levels, particularly in relation to aspects associated with livelihood security in poor communities, especially in the least developed countries. To this end, collaborative modelling efforts such as the Energy Modelling Forum need to involve experts from developing countries in their work.

18. Measures to reduce the vulnerability of developing country economies to fluctuations in energy prices, especially in the least developed countries, could be an effective avenue to be examined. In this light, economic diversification in developing countries could reduce any such adverse effects of response measures. The need to promote a domestic enabling environment to attract foreign direct investment, including the role of domestic provisions and regulations, could

also be considered. The impact of the relocation of energy-intensive production from developed countries to developing countries (carbon leakage) needs to be further examined.

19. The information presented in national communications on the impact of the implementation of response measures is being compiled by the UNFCCC secretariat in its process of compilation and synthesis of national communications. There is a need for further improvement in data availability from the different sources of information in both developed and developing countries. The collection and dissemination of such data should not be limited to the national communications but should include other channels as well.

20. A comprehensive approach regarding the choice of response measures was emphasized. Such an approach should cover all sources and sinks of greenhouse gas emissions, all six greenhouse gases, and the Kyoto Protocol mechanisms.

21. The following measures were mentioned by participants as possible options to address the impact of the implementation of response measures on developing countries under Article 4.8 and 4.9:

(a) Supporting the capacity of developing countries, giving due emphasis to the least developed countries, for data collection and analysis, and for further development and improvement of economic models and other analytical tools;
(b) Supporting the active participation of developing-country experts in existing collaborative modelling activities;
(c) Promoting economic diversification in developing countries, through a range of options, including enhancing foreign direct investment;
(d) Enhancing energy efficiency in the production and use of fossil fuels;
(e) Enhancing research, development and use of advanced fossil-fuel technologies that sequester or reduce carbon dioxide emissions;
(f) Examining impacts of policies and measures already adopted by developed countries, and of those that might be adopted, on energy markets, such as taxation, subsidies, and measures related to the energy mix in those countries, including fossil fuels, new and renewable energy sources, and nuclear energy;
(g) Supporting the development and use of natural gas in developing countries;
(h) Supporting research into, and the development and use of, renewable energy technologies in developing countries;
(i) Facilitating the transfer of technology to developing countries in support of the abovementioned measures;
(j) Examining actions related to funding (such as compensation) for proven adverse impacts of response measures.

Annex I

WORKSHOP ON INITIAL ACTIONS RELATING TO THE ADVERSE EFFECTS OF CLIMATE CHANGE IN ACCORDANCE WITH ARTICLE 4.8 AND 4.9 OF THE CONVENTION

9-11 March 2000
Internationales Kongresszentrum Bundeshaus Bonn
(former parliament building), Bonn, Germany

Agenda

Day 1: Thursday, 9 March 2000

09.00 - 10.00
Registration

Morning session

10.00 - 10.30
* Introduction and opening of the workshop
Harald Dovland, Chairman of the SBSTA
Claire Parker, Coordinator, Implementation Programme, UNFCCC secretariat

10.30 - 10.50
* Coffee break

10:50 - 12:30
* Overview
Youba Sokona, Environnement et Développement du Tiers Monde (ENDA-TM), Senegal
Thomas Downing, Oxford University, UK

12.30 - 14.00
* Lunch break

Afternoon session

14.00 - 15.30
* Adverse effects of climate change on food security
Martin Parry, University of East Anglia, UK
Thomas Downing, Oxford University, UK

15.30 - 17.00
* Adverse effects of climate change on water resources
Bubu Jallow, Department of Water Resources, the Gambia

17.00 - 17.20
* Tea break

17.20 - 18.50
* Adverse effects of climate change on economic activities
Jan Feenstra, Institute for Environmental Studies, the Netherlands

Day 2: Friday, 10 March 2000

Morning session

09.10 - 10.40
* Adverse effects of climate change on coastal zones
Mahendra Kumar, South Pacific Regional Environment Programme, Samoa

10.40 - 11.00
* Coffee break

11.20 - 12.30
* Adverse effects of climate change on human health
Roberto Bertollini, World Health Organization

12.30 - 14.00
* Lunch break

Afternoon session

14.00 - 17.00
* Specific needs and special situations of the least developed countries
Mamadou Honadia, National Council for Environmental Management, Burkina Faso
Mahendra Kumar, South Pacific Regional Environment Programme, Samoa

17.00 - 17.20
* Tea break

17.20 - 19.20

* Actions related to funding, insurance and the transfer of technology to meet the specific needs and circumstances of developing countries arising from the adverse effects of climate change, including consideration of how adaptation measures can be integrated into national strategies for sustainable development and could help to form a basis for action in multilateral and bilateral development programmes.

Michael Cooper, CGU Group, UK
Hiro Kazuno, Ministry of Foreign Affairs, Japan
Espen Ronneberg, United Nations Department of Economic and Social Affairs
Youba Sokona, Environnement et Développement du Tiers Monde (ENDA-TM), Senegal

Day 3: Saturday, 11 March 2000

Morning session

09.00 - 10.10

* Actions *(cont.)*

10.10 - 10.30

* Coffee break

10.30 - 12.30

* **Panel discussion**

Discussants:

Bangladesh
European Community
Jamaica
Netherlands
New Zealand
Uganda

12.30 - 14.00

* Lunch break

Afternoon session

14.00 - 15.00

* **Panel discussion** *(cont.)*

15.00 -

* Conclusions

Annex II

WORKSHOP ON METHODOLOGICAL APPROACHES AND WHAT ACTIONS ARE NECESSARY UNDER THE CONVENTION, RELATING TO THE IMPACT OF THE IMPLEMENTATION OF RESPONSE MEASURES, IN ACCORDANCE WITH ARTICLE 4.8 AND 4.9 OF THE CONVENTION AND IN THE LIGHT OF MATTERS RELATED TO ARTICLE 3.14 OF THE KYOTO PROTOCOL

13 - 15 March 2000
Internationales Kongresszentrum Bundeshaus Bonn
(former parliament building), Bonn, Germany

Agenda

Day 1: Monday, 13 March 2000

09.00 - 10.00
Registration

Morning session

10.00 - 10.30
* Introduction and opening of the workshop
Harald Dovland, Chairman of the SBSTA
Claire Parker, Coordinator, Implementation Programme, UNFCCC secretariat

10.30 - 10.50
* Coffee break

10.50 - 12.30
* Overview
Thomas Rutherford, University of Colorado, USA

12.30 - 14.00
* Lunch break

Afternoon session

14.00 - 18.20 (including 20 minute tea break)

- Impact of response measures on terms of trade and international capital flows

  Knut Alfsen, Center for International Climate and Environmental Research, Oslo, Norway
  John Reilly, Massachusetts Institute of Technology, USA
  Tariq Banuri, Stockholm Environment Institute, Boston, USA

Day 2: Tuesday, 14 March 2000

Morning session

09.00 - 11.00

- Impact of response measures on developmental efforts

  Vanida Govender, Eskom Electrical Utility, South Africa

11.00 - 11.20

- Coffee break

11.20 - 12.30

- Specific needs and special situations of the least developed countries

  Philip Gwage, Department of Meteorology, Uganda
  Tariq Banuri, Stockholm Environment Institute, Boston, USA

12.30 - 14.00

- Lunch break

Afternoon session

14.00 - 15.50

- Least developed countries (cont.)

15.50 - 17.20

- Consideration of what actions are necessary, including those relating to funding, insurance and the transfer of technology

  Faten Al-Awadhi, Organization of the Petroleum Exporting Countries
  Ron Knapp, World Coal Institute
  Jonathan Pershing, International Energy Agency
  Thomas Rutherford, University of Colorado

17.20 - 17.40
- Tea break

17.40 - 19.10
- Consideration of what actions are necessary (*cont.*)

Day 3: Wednesday, 15 March 2000

Morning session

09.30 - 12.30
- **Panel discussion**

  Discussants:

  Bolivia
  Canada
  Japan
  Nigeria
  Saudi Arabia
  United Kingdom

12.30 - 14.00
- Lunch break

Afternoon session

14.00 -
- Conclusions

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